

ABSTRACT

Background and Objectives

“A comparative study between APACHE II and RANSON scoring system in predicting the severity of acute pancreatitis, is a prospective study of 33 cases of acute pancreatitis with the objective to compare the efficacy of APACHE II scoring system with RANSON scoring system in predicting the severity of acute pancreatitis.

Methods

33 cases of acute pancreatitis admitted in Rajiv Gandhi Government General Hospital, were considered in the study. All patients diagnosed with acute pancreatitis based on clinical suspicion and raised serum amylase levels were assessed with multiple variables of APACHE II and RANSON scoring system, the scores of which would indicate the severity of the disease and the scores were compared with raised serum amylase levels to know the efficacy of both the scoring systems. The sensitivity, specificity, positive predictive value (ppv) and negative predictive value (npv) of both scoring system in the present study was compared with the standard literature.

Results

The APACHE II scoring system had a sensitivity of 100%, specificity 80%, positive predictive value (ppv) 62% and negative predictive value (npv) 100%. The

RANSON scoring system had sensitivity of 66.7%, specificity 86.7%, positive predictive value (ppv) 33% and negative predictive value (npv) 96%. Area under curve (AUC) in APACHE II was 0.717 and in RANSON was 0.667. Of the 33 cases, 8 cases were considered severe pancreatitis of which all 8 were severe according to APACHE II but only 3 of the 8 were considered severe by RANSON score. There was no mortality in the study. Local and systemic complications were seen in patients considered severe by APACHE II score only.

Conclusion

The APACHE II system takes into account all the major risk factors that influence outcome from disease, including the acute physiological derangements as well as patient ability to recover which may be diminished by advancing age or chronic disease. The range of APACHE II score is wide providing better spread between mild and severe attacks, because varying weights are assigned to increasingly abnormal values, rather than all or none judgements than RANSON scoring system.

By the results obtained it can be concluded that APACHE II score is better than RANSON score in predicting the severity of acute pancreatitis.